| | | |
|---|---|---|
| **ISIS-Hello** | ECT-ALGORITHM=<br>00-80-C2-11 (after .1aq's)<br>B-VID = VID\|0 | If VID = 0 then no B-TAG<br>else normal B-TAG.<br>Only one ECT-ALGORITHM required and only one B-VID (or 0) required.<br>Multiple B-VIDs may be used but only one ECT-ALGORITHM for Qbp now. |
| **ISIS-LSP** | ISID-ADDR-TLV<br>B-VID (as above)<br>***Tx;Rx;Ts***;,***SUB-ALG:5***,ISID:24<br>or Reserved:1:SUB-ALG:4... | ISID in Qbp mode when B-VID matches ECT-ALGORITHM VID (above).<br>**Tx**=(S,G) Transmitter, **Rx**=Receiver, **Ts** =(*,G) Transmitter<br>Tie breaking/root selection based on XOR against MASK[**SUB-ALG**]<br>(similar to the 802.1aq CIST algorithm but with MASK) |
| **ISIS-LSP OPAQUE** | Optional opaque data for Qbp<br>ECT-ALG overrides BridgePriority | Opaque Data for ECT-ALGORITHM 00-80-C2-11 (.1Qbp) is:<br><SUB-ALG:8, BridgePriority:24> ..... => Fine grained root control |
| **Group DA Format** | (*,G) => F(***SUB-ALG***)-xx-xx-xx<br>(S,G) => SpSource-xx-xx-xx<br>Head => B-DA | Shared TREE – identifies **SUB-ALG** (for RPFC) where xx-xx-xx is ISID.<br>Source TREE uses SPBM format where xx-xx-xx is ISID.<br>Head replication just uses normal unicast B-DA for each copy. |
| **Compute** | Unicast | Run SPF from self. On equal cost alternatives, "OR" ECMP sets of the two alternatives together to form ECMP set for this child (like OSPF/IP). |
| **Compute** | Multicast – Shared Tree<br>16 trees, one per ***SUB-ALG***<br>when at least one ***Ts*** bit is set | Find node with lowest BridgeIdentifier XOR MASK[***SUB-ALG***]. Run SPF with that node as root. When two equal cost choices, the child picks parent with lowest BridgeIdentifier XOR MASK[***SUB-ALG***].<br>Then prune tree per ISID with ***Ts*** bit set. FIB DA is F(***SUB-ALG***)-xx-xx-xx |
| **Compute** | Multicast – Source tree<br>16 per source, one per ***SUB-ALG***<br>when at least one ***Tx*** is set. | Same as above except that source is the Bridge with the ISID ***Tx*** bit set.<br>Then prune tree per ISID (same as AQ but *not symmetric*) because tie breaker only backtracks to parents to pick min masked BridgeIdentifier. |
| **Compute** | Multicast – Head end replication | Head end builds replication over unicast tunnels to all ISID with ***Rx*** set. |
| **Data Path** | PBB + F-TAG [B-TAG optional] | F-TAG = <F-TAG-TYPE:16, PCP:3,DEI:1,RESV: 6, ***TTL***:6, ***Flow-ID***:16 > |
| **Loop Mitigation** | TTL<br>RPFC – (S,G)<br>RPFC – (*,G) | Decrement.<br>New – must check SA ECMP 'set' against L2 ECMP FIB, if matches any ok.<br>New – must lookup <SA, ***SUB-ALG***> in new tables.. |

802.1Qbp – single slide design - Peter Ashwood-Smith (peter.ashwoodsmith@huawei.com)

red => undecided – obviously OA&M not included